

Circular Economy: A Slovenian Example

Circular economy is one of the biggest challenges, as well as one of the most exciting opportunities for business today.

The Earth's resources are not limitless. We need to move beyond economic models that only take new production into account, towards having recycling, craddle to craddle and circular use of resources thought into every investment decision.

Circular Economy Case Story in Slovenia

Nigrad d.o.o. is a utility company, established in 1857 in the Municipality of Maribor and acts as a fundamental maintenance and construction company in the city. Nigrad's core business is the maintenance of public transport areas, streets, squares, and roads with related facilities and devices. Also the maintenance of public sewerage, public lighting, traffic light system, and the implementation of construction and other works for municipal infrastructure needs.

Following its strategy, the company Nigrad d.o.o is committed to finding solutions for more responsible management and protection of the environment, which is represented by the European recognizable model of the circular economy.

Nigrad d.o.o. has been an important partner of the Municipality of Maribor, acting especially intensely in the field of the use of secondary raw materials and in bringing new, innovative technologies and processes to the construction sector in the city.

Maribor is the first Slovenian municipality with an approved circular economy strategy. The basic idea of the Strategy for the transition of the City of Maribor to the circular economy is its innovative model, as a system for managing all the resources available in the Municipality of Maribor and the wider urban area.



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Tomislav Ploj from Nigrad d.o.o. said: "It is great to be a partner of the CINDERELA project.

The project allows us to learn from other partner members, to make a difference in our local area.

Our circular economy project is a first in Slovenia, and we are very proud to be part of it."



Svet Strojev is a distributor and service partner for construction and city maintenance equipment in Slovenia. Their business operates in the following sectors:

- Asphalt
- Concrete
- Crushina
- Excavation
- Sanitation

Svet Strojev is the Fibo Intercon partner in Slovenia, promoting mobile concrete batching plants.

The Challenge

Nigrad d.o.o. is a partner in the CINDERELA project. The CINDERELA project aims to untap this potential by developing and demonstrating a new business model (CinderCEBM) to assist companies in setting up successful circular economy business cases based on waste-to-resource opportunities. CINDERELA receives funding from the European Union's Horizon 2020 research and innovation program.

In August 2020, the Institute for Spatial Policies (IPOP) published a call for Cities to cities, where municipalities and public companies were invited to share their good practices of sustainable urban development.

Nigrad d.o.o applied, and the evaluation committee selected the proposal to go ahead. The proposal was to build a circular economy by using recycled aggregates for manufacturing concrete building blocks.



Tomislav Ploj
Head of Development at
Nigrad d.o.o.



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Sustainability and supporting our customers to become sustainable champions is our number one goal.

Developing processes and systems from innovational engineering is what we do at Fibo Intercon.

We have an outstanding engineering team who can support your circular economy project.

We are a professional engineering company with a friendly family culture, so feel free to call us.

The Solution

The solution was to purchase a concrete batching plant and concrete block moulds. The blocks are then sold back to the construction sector. The blocks build material bay walls, buildings, retaining walls, pile mats, river erosion protection, farm buildings and lots more.

SVET STROJEV doo offers one-stop-shopping of all necessary equipment.

The CINDERELA project supported the purchase of the concrete batching plant blocks moulds and the loading vehicles.

The pilot production plant is producing the following four groups of SRM-based products:

- Recycled aggregates
- Geotechnical composites
- Green concrete
- Recycled soil





A comprehensive system of recovery and monitoring of mass flows is envisaged for the processing of waste before treatment.

Nigrad d.o.o. produced their first green blocks for separation units made of recycled aggregates in Dogoše on November 13, 2020. These will later be used for the construction of a small demo facility and the construction of concrete partition walls at the landfill to separate aggregates.

The recipes to produce green concrete were prepared by Nigrad's project partner, the Slovenian National Building and Civil Engineering Institute (ZAG), based on previous laboratory tests of delivered samples of various secondary raw materials.

Henrik Jeppesen CEO Fibo Intercon

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We are a solutions driven organisation. Over the years we have solved many concrete business challenges, by developing and delivering innovative solutions.

Our customers thrive and generate profits not just from buying a Fibo Intercon batching plant but by purchasing business driven concrete solutions that keep working year after year. The consequence of quality and innovation.

Our Concrete block business proposal is a very popular solution with our customer. It is an ideal business opportunity for recycling and shaping local circular economy. Contact Martin to learn more.



Martin Fischer - Sales Manager - Fibo Intercon

Business In a Box

We have developed a Business in a Box for manufacturing concrete interlocking blocks. It includes everything you need to manufacture and sell concrete interlocking blocks.

We also have a done for you business plan for the concept that delivers a 20% net profit.



Plant List

The plant list includes just about everything you need to manufacture large quantities of interlocking blocks.

- FS1200 batching plant
- Big Bag cement silo
- · Concrete elevator
- Second-hand forklift truck
- · Second-hand bucket loader
- 25 number 600 x 600 x 1800 moulds
- 25 number 800 x 800 x 1600 moulds
- · Mould magnets, lifting bolts
- Lifting clamp
- Block turner

The plant list is priced to allow us to work out the required financing for purchase. Monthly financing costs are then added to the general overhead within the business analysis tool, which projects sales based ROI's..